Information about bank intangibles, analyst information intermediation, and the role of knowledge and social forces in the 'market for information'

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Abstract:

Although developments in the sell-side analyst literature have revealed the role of intellectual capital (IC) in analysts' work, the whole information intermediation progress of IC remains a "black box". This paper develops an analyst information intermediation model, illustrating how 'soft' information changes through analyst acquisition, processing and disclosure of information. Bourdieu's ideas of habitus, field and capital are used to develop our explanation of the analyst information intermediation model. We argue that the combination of empirical evidence and theoretical explanation provides a new and more comprehensive way to improve understanding of the role of analysts within knowledge and social contexts.

Key words: Analysts; Market for Information (MFI); Business Models; Soft Information; Social context.

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1. Introduction[2]

Sell-side analysts, as one of the most important groups of capital market participants, have received attention from academic research for several decades. Acting as intermediaries, sell-side analysts receive and process information, and then pass it along to fund managers (FMs) and other investors. Despite substantial evidence supporting the argument that analysts' work can help to improve market efficiency and affect investors' decision making (e.g., Healy & Palepu, 2001), there is considerable academic literature showing that the work of analysts appears to be somehow subjective and biased (Imam & Spence, 2016; O'Brien, McNichols, & Lin, 2005). This paradox, to a large extent, is due to the limited understanding of sell-side analysts' role in capital markets. Understanding analysts' activities and how they acquire, interpret and communicate value-relevant information is of significant importance to improve our understanding of how capital markets function (Baker & Imam, 2008; Bradshaw, 2011; Imam & Spence, 2016).

Academic literature on market participants, such as financial analysts and FMs, has generally been based on traditional theory or behavioural finance, with focus of the input and outcome of their decision making. This, however, fails to explain what these market participants actually do in practice and how they add value to the flow of information in capital markets (Taffler, Spence, & Eshraghi, 2017). Therefore, there has been an increasing call for using a sociological perspective (e.g., Holland, et al., 2012; Imam, Barker, & Clubb, 2008; Imam & Spence, 2016; Taffler et al. 2017). Hirshleifer (2015) argues that there is a need to move from behavioural finance to social finance, including social norms in the study of financial behaviours. Some studies have investigated decision making of FMs (e.g., Barker, Hendry, Roberts, & Sanderson, 2012; Eshraghi & Taffler, 2015; Holland et al. 2012; Taffler et al. 2017) and analysts (e.g., Abhayawansa, Aleksanyan & Bahtsevanoglou, 2015; Brown, Call, Clement, & Sharp, 2015; Imam & Spence, 2016) from such a perspective, but evidence on how analysts use information in their decision making process is limited. The processes of how analysts

[2]*Abbreviations:* IC, intellectual capital; FM, fund manager; MFI, market for information; HC, human capital; SC; structural capital; RC, relational capital.

work remain to a large extent a "black box" (Bradshaw, 2011; Brown et al. 2015). There is no integrated model revealing how sell-side analysts play a role in the process of information flows between companies and investors in the market.

This paper seeks to fill this gap by developing a model of analyst information intermediation, set in the contexts of analysts' parent firms and the wider "market for information" (MFI) (Barker, 1998). We aim to unpack the "black box" of sell-side analysts' work by exploring how analysts in the banking industry acquire, interpret and report 'soft' information about bank intangibles in their decision making process. By so doing, this paper attempts to improve the understanding of financial analysts' engagement with useful information in the MFI. We focus particularly on analysts' usage of 'soft' information because academic research in this area from a sociological perspective is particularly rare.

We conduct interviews with twenty six bank managers and bank analysts in the UK and documentary analysis of analyst reports produced by some of the interviewees. Based on interview data, a model of analyst information intermediation is developed to explore the wider structures and processes in the MFI and how they relate to analysts and their intermediary role between companies (banks), FMs and markets. In this paper, empirical evidence (including interviews and content analysis of analyst reports) and theoretical analysis play a combined and active role in explaining the developed model. It contributes to knowledge of and literature on market participants' decision making in several ways.

First, traditional literature on sell-side analysts focuses mainly on analysts' work on earnings forecast and stock recommendation, and limited attention has been paid to their role as information intermediaries. As a result, the work of analysts remains a "black box" in academic literature. Several studies have peeked into this "black box" from different aspects, such as the inputs analysts use as the basis for their decisions (e.g., Brown et al. 2015), the usage of information in their valuation models (e.g., Abhayawansa et al. 2015; Imam et al. 2008) and the outputs of analysts' decision making (e.g., Abhayawansa, Aleksanyan, & Cuganesan, 2018). However, there is no integrated model revealing the role of sell-side analysts in the process of information flowing from companies to investors. This paper aims to improve our understanding of sell-side analysts' work in the MFI by developing a model of the information intermediation role of analysts through theorising empirical data.

Second, we focus on the role of 'soft' information and chose the banking sector, for which very limited empirical work has been done previously, as the research context. Empirical evidence shows that accounting information has dominant impact on analysts' overall assessment of a company, but non-accounting information is also used in analysts' decision making in the way of contextualising and adding value to accounting data (e.g., Barker & Imam, 2008). Non-accounting information, such as some information about intangibles, may not be price-sensitive information based on conventional theory; yet it is still important, and even more important in certain contexts than accounting or tangible information, in affecting investment decision making (e.g., Chen, Danbolt, & Holland, 2014). This paper, therefore, seeks to explore how sell-side analysts make sense of soft information and how the contextual factors in the MFI affect their usage of such information. Investigating how the same type of 'soft' information changes during the process of analyst research, analysis and reporting activities, provides novel insight into the analyst information intermediation role. Based on content analysis of analyst reports, Abhayawansa et al. (2018) find that the relevance of intellectual capital (IC) elements in the eyes of analysts is conditional on the context. They argue that the identities of IC elements are variable, dynamic and transformative, and the role of IC needs to be understood in relation to different market actors who mobilise IC elements. Their findings challenge the conventional IC research that models IC and categorises IC statistically. However, their findings are based entirely on the analyst reports. Our paper shows how IC information changes from the original disclosures provided by companies to that interpreted and reported by analysts, providing further evidence supporting Abhayawansa et al.'s (2018) arguments. The banking sector is very knowledge-intensive, and market failures in this sector highlight the importance of understanding how soft information is used by market participants.

Third, this paper strengthens the extant literature by further exploring the impact of social and knowledge contextual factors on the process of making sense of IC information by analysts, based on the theoretical work of Bourdieu (1990). Imam and Spence (2016) have also used Bourdieu's concepts and theoretical arguments to explore the nature of the work that analysts do in the context of the MFI. Their study focuses on the interaction of sell-side analysts and their clients and looks at general information communicated between the two types of market participants. They call for further research

that explores how people actually behave and interact with each other using sociological inquiry. Our paper provides further evidence on the interaction of bank managers and sell-side analysts, with special emphasis on IC information and paying more attention to the role of knowledge and social forces in the information intermediation process.

The paper is structured as follows. Section Two reviews relevant theory and literature. Section Three summarises the data collection and data analysis processes of the paper. Section Four presents empirical results and explores the information intermediation role of analysts through their company research activities, their internal analysis and information production processes, and their external reporting and advisory activities. Social and economic literature and theory are used to explain the empirical model. Conclusions are discussed in Section Five.

2. Current state of analyst research and the theoretical framework

Although there have been several decades of research on sell-side analysts, the development appears to be uneven. Many of these studies focus narrowly on analysts' output and the statistical properties of their forecasts (Schipper, 1991; Bradshaw, 2011), with limited attention paid to how analysts process different types of information. Schipper (1991) reviews the literature on analysts' forecasts and identifies that research on their decision-making processes focuses more on buy-side analysts, with very little consideration of what kinds of information analysts use and how they use it. This was still the case when Bradshaw (2011) surveyed sell-side analyst research in 2011. Empirical evidence on how information on corporate intangibles (or IC) is perceived and used by sell-side analysts appears to be even rarer. Although IC have been the main value creator for firms in many industries (Zéghal & Maaloul, 2011) and IC information is important to the capital market (Nielsen, Rimmel, & Yosano, 2015), analyst literature has mainly focussed on analysts' numbers and advice outputs, and their market impact. Moreover, explanations of market participants' decision making are mainly based on mainstream finance theory or behavioural finance (Taffler et al. 2017). However, it is argued that conventional theories fail to explain the process by which information is communicated and understood, especially for soft information (e.g., Barker et al. 2012). This leads to the increasing call for research on the work of analysts and FMs using a sociological perspective.

Recently, authors such as Brown et al. (2015), Abhayawansa et al. (2015), and Imam & Spence (2016) have begun to penetrate the "black box" of sell-side analyst decision-making processes from the sociological perspectives, with some (e.g., Abhayawansa et al. 2015) paying particular attention to the use of IC information. However, we observe that there is an absence of integration of empirical evidence on the input, process and output of sell-side analysts. We therefore argue that a coherent and integrated model is needed to reveal the process of how analysts use information in their decision making and how social and knowledge contexts within which analysts work affect the process of their sense making of the information. In Section 2.1 below, we review extant literature on analysts' input, process and output, with particular emphasis on IC information. Section 2.2 contains a discussion of the theoretical framework of our study.

2.1. Literature on analysts and information

Market-based studies find analysts' earnings forecasts and buy/hold/sell recommendations are value-relevant to investors (Healy & Palepu, 2001), showing that analysts' forecasts are superior to time-series models (e.g., Brown, Griffin, Hagerman, & Zmijewski, 1987). This stream of research is mainly drawn from traditional finance theories and suggests that analysts play a valuable role in improving marking efficiency. On the other hand, Imam and Spence (2016) note that research drawn from behavioural finance provides consistent evidence of analyst bias in forecasting and when making recommendations (e.g., McNichols & O'Brien, 1997). The paradox has attracted significant attention in the literature on decision making of financial analysts, with studies investigating the information that goes into their decision making (i.e., inputs) and the outcome of their decision making (i.e., outputs).

On the input side of analysts' decision making, the literature has primarily focused on prices and financial statement information (Bradshaw, 2011). A number of studies have paid attention to the types of information analysts are interested in, with consistent evidence showing that non-accounting information has been used intensively by sell-side analysts (e.g., Abhayawansa et al. 2015; Brown et al. 2015; Chen et al. 2014). Chen et al. (2014) find that intangible information is perceived by analysts as important and value-relevant in the process of bank valuation. Abhayawansa et al. (2015) find that sell-side analysts make extensive use of IC information in forming their perceptions of companies'

future prospects, in deriving valuation model inputs, in developing price and investment recommendations, and in analyst-client communications. However, contradictory evidence is provided by Campbell and Slack (2008), who observe that the narrative parts of annual reports, which normally contain information about banks' intangibles, tend to be relatively unimportant to sell-side analysts.

On the output side of analysts' decision making, there have been various surveys and analyses of analyst reports, providing insights into their content (e.g., Arand & Kerl, 2012; Coram, Mock, & Monroe 2011; Govindarajan, 1980; Sidhu & Tan, 2011). This stream of research places much emphasis on the use of 'hard', or numerical, information sources, such as company financial statements, growth changes and market share, in creating analyst numerical estimates and advice outputs.

A limited number of studies show how 'soft' information sources (e.g., qualitative information about companies' IC and their business model) are used with 'hard' information sources in creating analysts' public outputs. Content-based studies find that analysts provide more good news in their public reports to support their recommendations for 'buys', and that non-accounting information, such as firms' management and strategy dominates accounting information in their reports (e.g., Barker & Imam, 2008; Breton & Taffler, 2001). Abhayawansa and Abeysekera (2009) note that IC information disclosed by sell-side analysts cannot be taken at face value. They argue that issues of signalling, analysts' incentives/influences, political economy and globalisation have to be considered when explaining IC disclosure in sell-side analysts' reports. Based on the theory of impression management, Abhayawansa and Guthrie (2012) argue that IC information is used by analysts to manage perceptions and to "subdue the pessimism associated with an unfavourable recommendation, increase credibility of favourable recommendations and distinguish sell from hold recommendations" (p. 398).

The above literature investigates the inputs and outputs of analysts' work, providing some evidence on what types of information are used by sell-side analysts and communicated to the capital market. However, little is known about how different types of information have been used in analysts' decision-making (Bradshaw, 2011; Brown et al. 2015). A number of empirical studies examine correlations between inputs and outputs of analysts' work, incorporating conditioning variables (Bradshaw, 2011). Asquith, Mikhail and Au (2005) examine the market reaction to all the elements of analysts' reports, including not only financial information but also some qualitative factors, and suggest

that the analyst's role is to provide interpretation of information releases to the market. Beccalli, Miller and O'leary (2015) investigate how analysts use financial and technical information in the microprocessor industry, showing that technical and financial disclosures complement each other. Gu and Wang (2005) explore the relation between analysts' earnings forecasts and firms' intangible assets. Their findings suggest that the high information complexity of intangible assets increases analysts' forecast error of intangible-intensive firms.

This stream of literature explores analysts' decision-making processes by assessing the relationships between the proxies of analysts' input information and their outputs. However, without direct observation of analysts' decision making processes and consideration of other factors (e.g., social structures and network), evidence appears to be exclusively indirect (Bradshaw, 2011) and provides limited explanation of analysts' intermediary role (Beunza & Garud, 2007). There are several studies, therefore, attempting to understand how analysts interpret and use information using interviews. For example, based on interviews with analysts and content analysis of their reports, Barker and Imam (2008) provide evidence on analysts' interpretation and use of earnings data, showing that both accounting-based and non-accounting-based information are used to form analysts' perception of earnings quality.

The aforementioned studies are mainly drawn from traditional and behavioural finance theories. Although they provide some insight into analysts' usage of value-relevant information, little attention has been paid to the social contexts within which analysts make their decision. Recently, a small number of studies have tried to gain an understanding of the decision making process of analysts (e.g., Beunza & Garud, 2007; Imam & Spence, 2016) and FMs (e.g., Eshraghi & Taffler, 2015; Holland et al. 2012; Taffler et al. 2017) from a sociological perspective. For example, Taffler et al. (2017) explore how FMs make sense of what they do on a day-to-day basis by focusing on emotional aspects of their work, while Eshraghi and Taffler (2015) investigate how FMs "make sense of the uncertain and opaque world in which they operate" (p. 692). Using a grounded-theory, qualitative content analysis of analyst reports, Beunza and Garud (2007) seek to clarify the economic function performed by security analysts. They suggest that the most important function of analysts is that of frame-makers; that is, as specialised intermediaries that help investors value stocks in contexts of extreme uncertainty, rather than

forecasting and providing investment advice. Imam and Spence (2016) shed light on how sociological theories can help to understand the output of sell-side analysts' work in the MFI. Their study shows that the primary value of sell-side analysts' work lies in the rich contextual information that they provide to buy-side analysts.

These studies look at information that analysts or FMs used in general, without paying specific attention to soft information that is argued to be increasingly important for company valuation. If our understanding of what analysts do is limited (e.g., Bradshaw, 2011; Lo, 2012), the literature on how analysts or FMs interpret and communicate IC information is even rarer. Holland et al. (2012) shed light on how FMs acquire, create and exploit IC information for the purpose of investment decision using a sociological perspective. Abhayawansa et al. (2015) argue that how IC information is used is more important than what IC is used, and use interviews with analysts to investigate the role of IC information in their company valuation. Although their study provides some evidence on the factors (e.g., the attributes of the context of analyst decision-making and analysts' cognitive and time limitation) that affect the mechanisms and the rationale of analysts' use of IC information, further research is needed to explore the social contexts in more detail. Eshraghi and Taffler (2015) suggest that more research needs to be done to reveal how corporate culture and ethos of the investment house affect decision making of FMs and other groups of market participants.

In summary, the extant literature is limited in terms of how analysts make sense of information in their decision making process, and is even more silent with regard to their use of IC information. This is partly due to the lack of an integrated model covering the entire process of analysts' work. Extant literature has made significant progress in exploring analysts' work in relation to the input, analysis and/or output, but the overall information intermediation process among company managers, sell-side analysts and investors in the capital market remains unclear, especially concerning analysts' private information processes set in the context of the MFI (Imam & Spence, 2016). This paper, therefore, seeks to contribute to these areas by developing a sell-side analyst information intermediation model. Based on findings from a qualitative study in the banking sector, the model reveals how bank analysts collect, analyse and communicate information in the MFI, and how the knowledge and social contexts

affect such a process. It seeks to improve our understanding of analysts' work through investigating how people actually behave and interact in practice (Imam & Spence, 2016).

2.2. Applying the Bourdieusian framework to analysts and the MFI

Discussion in previous sections has shown that conventional finance theories and sell-side literature provide few insights into the actual role of analysts in context (Imam & Spence, 2016), as they focus too much on the content of the analytic work itself and overlooks "the social, cognitive and material processes that make forecasting possible" (Beunza & Garud, 2007, p. 17). Recent work by Abhayawansa and Guthrie (2012) and Imam and Spence (2016), among others, reveal the importance of social and knowledge contexts in studying analysts' economic functions.

Imam and Spence (2016) point out that existing sociological inquiry of analysts is mainly dominated by Actor-Network Theory which "ascribes agency to objects" (p. 231) and ignores that objects themselves are the production of human elaboration. They argue that a Bourdieusian framework, concerned with how different groups of agents and different forms of capital interact within the context of the wider field, provides a better means to examine the interactions between sell-side and buy-side analysts. We adopt this suggestion and apply Bourdieu's (1990) framework of field, capital and habitus as the theoretical underpinning to interpret the analyst information intermediation model.

Dobbin (2008) argues that the great power and potential of Bourdieu's framework is the integration of "a theory of the individual (habitus), a theory of social structure (the field) and a theory of power relation (the various forms of capital)", which, however, has not been fully appreciated in academic research (p. 53). In this paper, Bourdieu's concepts are used in two deeply connected domains. First, part of each sell-side analyst's habitus and role is located in the social structure (field) of the parent financial firm, where organisational power relations are exercised. Second, part of each analyst's habitus and role is located in the larger social structure (field) of the MFI, where network power relations are exercised on the corporate information supply side, and the FM and buy-side analyst information demand side. The analyst information intermediation model covers both domains. Sell-side analysts, management, FMs, and other MFI agents in a shared MFI field use their accumulated social

and cultural capital as well as habitus to influence each other, the information content that they process, and the ways in which they process it (i.e., information acquisition, analysis and disclosure).

Bourdieu uses the concept of **'fields'** to represent the network or structure of relationships (Bourdieu, 1990). The field consists of "a set of objective, historical relations between positions anchored in certain forms of power (or capital)" (Bourdieu & Wacquant, 1992, p. 16). It includes all relevant actors in a social space and the relationships between the social positions that those actors hold within the given social space (Dobbin, 2008; Imam & Spence, 2016). In this paper the connected field in which the analyst information intermediation process takes place includes both MFI networks and the analyst's parent firm. This is where social and knowledge resources are mobilised by analysts in developing information about bank intangibles.

The MFI field is the institutional means to connect corporate information supply activities to security market information demand activities (Barker, 1998; Holland, 2017). This is especially relevant in relationships, or MFI sub-networks, where frequent, high quality exchanges, and disclosures of information occur between companies, analysts, FMs and other agents. The MFI is also a 'market for knowledge' (Meusburger, 2009), in which knowledge of companies, of economies, of markets and of market actors, such as analysts, is created, exchanged, shared and used. Knowledge creation and capabilities lie at the heart of information production and use by analysts in the MFI and security markets (Holland et al. 2012; Holland, 2017). The different groups of agents (e.g., bank managers, bank analysts and FMs) are positioned and organised in the field of MFI (Malsch, Gendron, & Grazzini, 2011). They compete for the resources or capital available to them, develop their habitus, and use this capital and habitus to affect the fields.

Bourdieu's notion of **'habitus'** offers a means to integrate the ideas of capital and field, and to link micro and macro levels of analysis (Dobbin, 2008; Malsch et al., 2011). Habitus refers to how agents develop their long-lasting disposition in the field (Imam & Spence, 2016). Bourdieu (1984) argues that habitus is both a structuring structure and a structured structure. On the one hand, it organises and affects agents' practice and their perception of the field and the way they use their capital; on the other hand, the principles and expertise that agents apply are the product of the interaction of the field and capital. Analysts' interactions with bank managers on the supply side of the MFI, FMs on the

demand side of the MFI, and with other team members in the parent firm, are combined means to structure habitus and capitals, which in turn structure information activities in the MFI and in parent firms.

For example, general knowledge of investee companies, parent financial firms, MFI and stock markets, is transferred to analysts within analysts' parent firms and MFI through training and 'learning on the job' (Holland et al. 2012). This creates and changes each analyst's individual habitus. On the other hand, habitus for individuals in the MFI forms the social and knowledge-based context in which information exchange and transactions take place. Experienced bank analysts internalise their understanding of, and act within their habitus of, socialised norms. They use this to frame their external MFI world and internal parent firm context and make sense of their actions (Weick, 1995). Bank analysts operate purposefully within their 'comfort zone' or familiar habitus, their familiar parent firm and team setting (investment bank), and familiar relations with bank management and FMs in MFI networks.

The habitus for individual analysts, bank management, and FMs have many similarities because they operate in a connected field. These groups 'buy into' the underlying, often implicit, ideas and values of finance capitalism. Mechanisms such as education, training and other socialisation processes play a role in internalisation of the broad language, values and assumptions of finance capitalism. These create 'general knowledge' (Stones, 2005) of subjective dispositions, capacities, and expectations. Agents such as analysts seek to maintain their power and rank in their specialist field and habitus, and gain professional recognition from a larger MFI social field by using their capital. Differences also exist among habitus for individual analysts, bank management, and FMs due to different experiences, functions and different parent field influences.

In Bourdieu's view, **capital** encompasses a wide variety of resources available to agents (Malsch et al., 2011). For sell-side analysts, the capital they have includes, for example, technical capital (denoting calculative and analytical expertise), social capital (denoting connections and networks) and symbolic capital (denoting reputation and prestige) (Imam & Spence, 2016, p. 232). Capital exists and functions in relation to both MFI and parent firm components of the field (Bourdieu & Wacquant, 1992),

and plays an important role in developing a range of possible strategies and actions available to agents (Malsch et al., 2011).

Power is an essential resource when discussing analyst activity in the MFI field and parent firm structures. Information power of analysts, their parent firms and other MFI agents is based on their technical, social and reputational capital. Analysts' information power varies through information acquisition, processing and reporting phases. Both bank managers and FMs have information power, but this is counterbalanced by analysts' information power based on capitals. Analyst information power is likely to arise from analyst parent firm size, reputation and control over resources, such as knowledge, financial capital, and transactions. Combinations of resources held by individual analysts and their parent firms determine the bargaining power of analysts relative to other MFI agents. In this world, we may interpret symbolic power as being exercised by a dominant elite, who have superior symbolic capital in the MFI field. The elite comprises, inter alia, top ranked bank analysts, top management in the largest banks, and FMs in large asset management firms. The symbolic power enables elites to design the 'rules of the game' in bank research practice and to elevate their preferred ideas or expert knowledge in practice as superior to others.

In this paper, the concepts of field, capital and habitus are used in an integrated way, with reference to both the MFI and parent firm, to help explain the analyst information intermediation model and changes in information about bank intangibles, which will be discussed in Section Four. They provide a new, tentative way to interpret and critically appraise empirical observations concerning analysts' roles and activities in knowledge and social contexts.

3. Methodology

The dominant research methods used in analyst literature is the empirical quantitative analysis of archival data, which appears to be a shortcoming as it limits our understanding of what goes on inside the black box of analysts' work (Bradshaw, 2011). Therefore, an increasing number of researchers call for alternative methods to investigate the behaviour of sell-side analysts rather than the associations between the outputs and inputs of their work (e.g., Bradshaw, 2011, Imam & Spence, 2016). In this study, we use qualitative interviews and content analysis of analyst reports in the banking sector to

explore the role of sell-side analysts as information intermediaries. Gu and Wang (2005) find that analysts' forecast accuracy is closely related to the information complexity of intangible assets, which is attributable to firms' industry-adjusted intangibles as opposed to industry-average intangibles[3]. Therefore, focusing on a single industry, especially a knowledge-intensive industry, allows researchers to explore how analysts understand industry-specific and firm-specific intangible information. We are particularly interested in the banking sector because of the importance of intangibles to banks' business model and the limited literature on banks' knowledge based intangibles (Chen et al. 2014).

We interviewed both bank analysts and bank managers in order to provide a more comprehensive understanding of how bank IC information is processed from information providers (i.e., bank managers) to information intermediaries (sell-side analysts). This is also consistent with the call for more research to explore in detail the way in which corporate managers interact with analysts (Imam & Spence, 2016).

There were a total of twenty six interviews conducted during two periods. The interviews lasted from 15 minutes to 1 hour and 20 minutes. Eighteen were face-to-face interviews conducted at the case organisitions and the others were telephone interviews. The main fieldwork was undertaken between June 2008 and September 2009, with twelve interviews with bank analysts and eleven interviews with senior managers in financial institutions being conducted. Imam and Spence (2016) have shed light on the nature of the work that financial analysts actually do in the MFI based on interviews with sell-side and buy-side analysts prior to the 2007 financial crisis. Our empirical study extends their work using interview data during and after the financial crisis. This is helpful to the research and further improves our knowledge of sell-side analysts' work because analysts could reflect on how information on bank intangibles played a role in their research, analysis and reporting activities under different circumstances.

[3] In Gu and Wang's (2005) study, they measure industry-adjusted intangible intensity relating to R&D, brand names, and recognized intangibles. These measures indicate the extent to which firms' intangible intensity deviates from the industry norm, defined as the firm's reported intangible minus the industry-average intangibles, where industry-average intangibles are defined as the three-digit SIC industry median value (Gu & Wang, 2005, p. 1683).

During 2014 and 2015, we attempted to collect further data from interviews with bank analysts, but experienced extreme difficulties. After contacting more than one hundred bank analysts in the UK, only three interviews were conducted. Two of them were follow-up interviews with analysts who were interviewed in 2008-2009.

The core questions in the empirical study are: How do analysts collect IC information from banks; why and how does bank IC information change in the analyst intermediation process; and what role do knowledge, social and economic forces play in the information change process? The interview questions were designed to be semi-structured in order to encourage participants to talk freely and openly about their opinions and experience. After each interview, we reviewed the interview process and revised the interview questions based on new information. With the interviewees' permission, twenty interviews were audio-recorded and then transcribed carefully in order to provide a basis for reliable data analysis. Notes were taken during each interview, regardless of whether it was recorded or not. The interview transcripts or notes were returned to the participants to get feedback and to check the accuracy of the data.

The interview data were processed by adopting a grounded theory method, using "a systematic set of procedures to develop and inductively derive grounded theory about a phenomenon" (Strauss & Corbin, 1998, p. 24). All the case data was manually analysed, during which process the researchers were able to actively interpret the data.

Data collected from interviews with bank managers and analysts were coded through three stages: open coding, axial coding and selective coding. Before open coding started, we attempted to familiarise ourselves with the data and noted our reflections in memos. In the process of open coding, the interview transcripts and notes were broken down into distinct units of meaning and conceptualised. The transcripts and notes were read very carefully in order to find key words or phrases. These key words and phrases were underlined or highlighted in the texts, and names or labels were given to them. We labelled codes that emerged from interviews with managers and analysts in a consistent way, but put them on separate code cards. Many micro concepts emerged from the line-by-line coding process, and were then grouped into subcategories and categories. In this progress, pre-existing theoretical constructs were integrated into our thinking of theoretical categories. For example, micro concepts related to

intangibles, such as management skills, employee engagement, customer relationships, and brand strengths etc., were categorised into three macro categories corresponding to conventional intellectual capital classification schemes, namely, human capital (HC), structural capital (SC) and relational capital (RC). It should be noted that such a line-by-line coding might lead to confusion or make the researchers feel "lost with the minutia of data" (Allan, 2003, p.2). On some occasions, such as when an interviewee told a story about his working experience, it was more sensible to look at the whole sentence or paragraph to find the main meaning of it rather than to divide it into individual words or phrases.

During the axial coding process, constant comparison was applied in order to make linkages between concepts and categories and indicate differences between interview data of bank managers and of analysts. Constant comparison is an important technique generally used in grounded theory data analysis, involving looking for similarities and differences, and thus allowing patterns and themes to emerge from the raw data (Goulding, 2002). Corbin and Strauss (1990) state that making comparisons can assist the researcher in guarding against bias and help to achieve greater precision and consistency. We iteratively visited and analysed case data and memos, observed both similarities and differences within the data sets of bank managers and analysts. Concepts, subcategories and categories developed in the open coding stage were connected and organised, and the model started to emerge.

The final stage of selective coding was the key process of developing the analyst information intermediation model, concerning the selection of the focal core code or the central phenomenon of our study. As the purpose of our interview data analysis was to develop the analyst information intermediation model, the central phenomena were the acquisition, processing and disclosure of soft information. All the concepts and categories developed and connected during the open coding and axial coding process were organised by connecting to the three phases of information flow. A model of the role of analysts in the information intermediation process was developed, showing how soft information changes during the process of analysts acquiring, interpreting and communicating it, as well as how various contextual factors affect the change of information.

Documentary analysis was conducted to complement the interview data, providing further evidence on the output of bank analysts' work. We reviewed 89 analyst reports published by some interviewees during 2007 to 2010, examining the information on tangibles and intangibles disclosed in

the reports. We focus on the narrative content of the reports, as categorising graphs and tables with regards to IC information may be too subjective (Goebel, 2015). The narrative parts of the analyst reports were manually coded based on the three categories of intangibles suggested by previous literature (Meritum, 2002; Goebel, 2015).

4. The analyst information intermediation model and the theoretical interpretation

This section presents and interprets the empirical model of analyst information intermediation constructed from the collected data. It begins with brief insights, or a "sneak peek into the investigated scene" (Locke, 2001, p. 121), by presentation of the empirical model. Each specific part of the analyst intermediation process is then discussed in detail in Sub-sections 4.2, 4.3 and 4.4. Each sub-section starts with a brief theoretical interpretation based on Bourdieu's (1990) framework. This is followed by discussion of each part of the model developed from our empirical evidence interpreted using a wider set of relevant literature.

4.1. A 'sneak peek' into the investigated scene

The empirical model of the information intermediation role of analysts is illustrated in Figure 1. This shows the main elements in the empirical model and illustrates how IC-based information and financial information flows from banks via analysts to FMs and the market. Despite its two-dimensional schematic structure, and emphasis on a primary flow or channel of information, Figure 1 hints at the complex multi-dimensional process of analysts' information intermediation in the connected field of MFI networks and analyst parent firm organisations. The flows of information occur in complex networks where many actors interact in many directions and channels over time.

< Insert Figure 1 about here>

This model shows that the network and market structure of the MFI and the analyst parent firm organisation provide the large external context in which the bank analysts operate. This is the 'field' where 'soft' information is changed, and used with 'hard' information, during acquisition, analysis, and disclosure phases. Analysts acquire information from banks via various public and private channels within MFI contexts and try to understand the value creation process in banks and the role of intangibles

and tangibles in bank business models. 'Soft' and 'hard' information is acquired from banks and other sources through public and private mechanisms. These information sources are combined, processed and analysed by analysts in parent firm contexts to produce various outputs including earnings estimates, valuations and recommendations. These outputs are disclosed to FM clients and participants in the MFI and the stock market through public and private channels. The contexts include social (parent firm organisation and MFI networks), economic (markets) and knowledge contexts. We observe similarities between bank and analysts' 'soft' information sets during the information acquisition phase; that is, a close copy or 'image' of bank information ('soft' information about bank intangibles in the business model) is obtained and understood by analysts. During the information processing and analysis phases, the 'soft' information changes, resulting in differences between the analysts' private 'soft' information set and the bank's 'soft' information set. There are also differences between 'soft' information disclosed in analysts' public reports to all investors and information disclosed in their private reports to and meetings with FM clients.

Bank analysts, bankers and FMs are part of the connected MFI and parent social systems and are influenced by social logics and forces (Henningsson, 2009; Fogarty & Rogers, 2005). Applying Bourdieu's ideas to the model, a major part of the field concerns 'position practices', or webs of interdependencies within which a bank analyst works (Jack & Kholeif, 2008). Analysts develop their habitus within their position practices, and this then influences their social position and associated identity and practice in the MFI and parent firm. As Imam and Spence (2016) point out, "a well-developed analyst habitus constitutes his or her 'feel for the game' and permits him or her to operate relatively freely, effectively and comfortably within the wider field" (p. 231).

Social factors and forces in the MFI, including norms of behaviour and a culture of secrecy, modify analysts' processes of information acquisition and disclosure of 'soft' and 'hard' information. Analysts are not passive in the face of social and economic influences, but attempt to influence others' perceptions of them through impression management. They seek to maintain their reputation and credibility in relations and in the wider MFI social context, and in their own parent firm.

During the analyst information intermediation process, 'soft' information serves as a powerful lens to explore intermediation and external influence. This is because the subjective, impressionistic

nature of 'soft' information makes it sensitive to the influence of social, knowledge and behavioural factors in the connected MFI and parent firm field. 'Soft' information contributes to future-looking 'hard' information, and together they are used by analysts to form joint (but differing) information packages in public and private domains. Soft information is changed and influenced by current circumstances and by external social and knowledge factors during intermediation. Hence, soft information has an important role in mediating the impact of knowledge and social factors on hard information.

4.2. Analysts' acquisition of 'soft' information

This sub-section uses Bourdieu (1990) and associated literature to interpret how bank analysts acquire 'soft' information about bank intangibles and how similarities in bank and analyst information sets arise. Similarities arise between bank management and bank analysts in areas such as seeking to understand the bank business model, resource interactions in customer networks and field, and hence value creation and impact on value. Analyst interactions with bank management in the MFI field over time (during banking change) are a means to structure *supply side aspects* of analysts' habitus and capitals, which in turn structure information acquisition activities and relative information power with bankers. Bank managers had information supply power but this was counterbalanced by analysts' information acquisition power based on analyst capitals.

4.2.1. How and why are analysts' and banks' information sets similar?

Analysts and bank top management seek to understand how banks create value and how markets value banks. With a shared habitus in the MFI field, both bank managers and analysts recognise the importance of private meetings, which serve as not only an effective way of collecting useful information for analysts (e.g., Brown et al. 2015; Chen et al. 2014; Soltes, 2014), but also an channel of developing good relations between managers and analysts (Graaf, 2018). Such relations and contact with bank managers are a form of social capital for analysts, encouraging similarities between bank and analyst information. Social forces arise in the MFI context and influence information flows (Henningsson, 2009). Symbolic capital, in the form of reputation and credibility in the MFI of bank

management and analysts, was considered to be important influences on private information exchange and behaviour.

Analysts' research and information production agenda are structured, in part, by the bank's business model, and potential changes to it. Chen et al. (2014) develop a grounded theory of bank intangibles, illustrating key features of bank business models and their functioning. It shows that the bank business model includes various levels of value creation interactions, namely intra-category interactions, cross-category interactions and network interactions. Analysts seek to understand these interactions and how they lead to better bank performance, and their understanding of the bank business model appears to be similar with bank managers'.

Similar to bank managers, analysts pay attention to the relationship between intangible investments or activities and intangible based resources (or intra-category interactions). For example, the interaction between marketing expenditure (RC investment) and brand power (intangible resource) is identified by both manager B6[4] and analyst A11. Interactions also include how top management HC affects other types of intangibles, how employee level HC and RC affect each other, and how they combine with SC to contribute to the value creation process (Chen et al. 2014). For instance, analyst A4 argues that '*the bank nowadays is nothing without [its] manager team running it*', and that top management who have long-term work experience across different parts of a bank can enhance customers' and investors' confidence in the bank. Findings from the analyst report analysis in Table 1 show that top management is the most frequently addressed item among all the intangible items, appearing in 24 of the 89 analyst reports.

<Insert Table 1about here>

Intangible resources also interact with tangible financial resources, which in turn improve the bank financial intermediation process and risk management (Chen et al. 2014). Analysts interviewed show their understanding of resource interactions in customer networks. For example, some analysts emphasise that intangibles play an important role in attracting deposits, especially during the financial crisis (e.g., A4, A7, A8 and A12), and affect lending activity, loan profitability and bank risk (e.g.,

[4] For the case code, A1 to A15 refers to interviews with bank analysts, and B1 to B11 to interviews with managers in the case institutions.

A11). Moreover, intangibles are argued to be important in reducing costs and affecting risk management (e.g., A2 and A6). Analyst A2 stresses that banks can gain information and knowledge from customer relationships, which reduces costs and risk.

Analysts also seek to understand how the consequences of intangibles' interactions in the bank business model are related to bank financial performance. Improved performance can come from individual intangible strengths or the interactions among different resources. For instance, several analysts argue that top management HC can affect institutions' returns or share prices (e.g., A1, A5, A6 and A10). Consistent with the views of the managers interviewed, some analysts (e.g., A6) perceive that the combined effects of different intangible resources and other types of resources are more important than the effect of individual intangible strengths in contributing to superior bank performance.

Chen et al. (2014) find that the aforementioned interactions occur in and are influenced by the external conditions. Similar to bank managers, many of the bank analysts interviewed recognise that the role of intangibles in the bank business model is affected by changes in environmental conditions (e.g., the financial crisis in 2007-2009) and industry characteristics. However, analysts identify different kinds of influences, reflecting variation in their quantitative and qualitative 'styles'.

For instance, some analysts perceive that the financial crisis drew public attention to some important intangible elements, such as brands and customer relationships. Others, however, argue that intangibles became less important during the financial crisis. They believe that greater importance was placed on tangibles. For example, analyst A7 argues that:

> *[W]hen you need capital, you need something you can sell easily... for our valuation right now, we completely ignore intangibles... Maybe when the market changes to a more booming side, then people would be much more willing to give some credit for intangibles.*

Managers and analysts also argue that changes in the banking industry, including technology development and business globalisation, can affect the role of intangibles in financial institutions. Analysts try to understand how banks change their strategies and their management of intangibles in response to the major changes they face. For example, analyst A3 explains that technology development provides customers with a greater choice of bank products and services, and hence increases the difficulty of maintaining customer relationships. Analysts also show considerable interest in sector

conditions, such as the role of brands in bank service delivery, homogeneous intermediation processes and products, the role of top management, and different banking segments. For example, analyst A3 argues that brand power, while important in the manufacturing industry, is less valuable in banking.

The documentary analysis in table 1 shows that 74 of the 89 reports mention the economic environment, including inflation, unemployment, credit cycle, consumer behaviours and industry conditions. Moreover, M&A or disposal of business items, are addressed in 24 reports, and the items of regulation, standard or policy in 32 reports. This shows that analysts are concerned about external conditions when analysing and valuing a bank, consistent with our interview findings.

4.2.2. How do knowledge and capitals affect analysts' acquisition of 'soft' information?

The analyst interviews reveal that experience-based knowledge about bank intangibles is as important to bank analysts as their calculative skills, and both contribute to technical capital. Over time, during information acquisition activities with banks and during periods of change in the banking industry, analysts observe bank business models in action and learn how they function and produce value (or not). Analysts seek to develop unique skills and capabilities in processing both private and public sources of information (Keane, 1983). These in turn help sell-side analysts create a knowledge and competence advantage within their immediate task area which they signal to MFI networks by their information and advice (c.f., buy-side analysts in Holland et al., 2012). Investment bank parent size and its knowledge resources are factors influencing whether analysts' knowledge advantages can be further enhanced (Royal & Rowley, 2012).

Knowledge is also a key dimension of the MFI social context (Knorr Cetina & Bruegger, 2002; Meusburger, 2009). Knowledge as technical capital held by banks, analysts and other market actors has a strong complementary and multilateral dependency. Both bank management and bank analysts need to understand their own and their information counterparts' economic processes, so that they can agree on a common information supply-demand agenda. Shared knowledge as shared elements of individual habitus is the basis for similarities in information acquisition.

However, in the case of technical capital, analysts and other MFI agents face additional problems of ignorance and uncertainty based on the idiosyncratic nature of company value-relevant intangibles

and the way in which they change with circumstances, time and learning (Catasus, Ersson & Wallentin, 2007; Cuganesan, 2005). This makes it more difficult to measure, define and report on the (increasing) role of IC in bank value creation and share prices. The problems affect technical capital for both bank management and analysts in their specialist tasks, and create shared incentives to cope with problems of understanding bank company intangibles.

It should be noted that analysts interviewed show variation in their quantitative and qualitative styles. For example, they identify different influences that financial crisis has on intangibles (see discussion in sub-section 4.2.1). This can be interpreted as those bank analysts (in quantitative-oriented parent investment banks) continuing to operate within their familiar habitus by focusing on technical analysis and ignoring how the crisis has emphasised the ongoing and central role of intangibles in bank performance (see further discussion in sub-sections 4.3.4 and 4.3.5). Turner (2009) argues that there had to be major improvements in the skill level (HC) and time commitment of non-executive directors of large complex banks to effectively oversee risks. The different ways bank analysts understand these issues play a central role in determining their bank information search strategy. Given that analysts put much of their effort and limited resources into finding one or two unique 'nuggets' of information unknown to others and quickly exploiting them, their interest in IC matters may intensify or diminish in the volatile post financial crisis period depending on their prior understanding of these issues and prior preferences for quantitative or qualitative analysis.

4.3. Analysts' processing of 'soft' information

This sub-section uses Bourdieu (1990) and associated literature to interpret how bank analysts process 'soft' information within a parent firm organisational field. Analyst interactions within their parent firm during change are a means to structure *internal aspects of* analyst's habitus and capitals, which in turn structure information processing activities. Differences between organisational fields in analyst parent firms and bank firms, and between habitus, capitals and information processing functions and tasks of agents in the different firms, play a role in how differences in bank and analyst information sets arise.

4.3.1. Differences between analysts' and banks' information sets

Differences are noted between analysts' private information and banks' information sets. Chen et al. (2014) find that the bank managers and analysts they interviewed have different views on intangibles. Managers have a more comprehensive picture of intangibles than analysts with regard to the definition and classification of intangibles. Their views also differ in terms of the importance of intangibles and the way they understand the interactions in the business model. Chen et al. (2014) show that bank analysts appear to have a partial focus on bank value creation compared to bank management.

We argue that the differences in bank and analyst information sets are a result of differences in technical capital factors between bank managers and analysts. They also arise from differences in field factors such as established decision routines and task factors. In terms of technical capital factors, Chen et al. (2014) show how bank managers seek to have a comprehensive understanding of a relatively stable value creation process. By contrast, analysts seek to understand 'just enough' about bank business models to identify the main value drivers and incremental changes in performance and value outcomes, and use this information to create a 'mosaic', or big picture. Simon's (1957) ideas of 'bounded rationality' and 'satisficing' are relevant in explaining analysts' 'just enough' decision behaviour. Analysts notice missing pieces in the jigsaw puzzle of their information set and search to create an improved even if incomplete picture. Such 'mosaic' formation can be interpreted as a process of sense making (Weick, 1995).

4.3.2. Analysts' understanding of bank intangibles

This sub-section extends Chen et al. (2014) by exploring, in more depth from analyst's perspective, how analysts process bank intangibles information, and how this differs to processing by bank management.

Bank managers tend to be consistent in their views of the definition of intangibles and the important roles that intangibles play in the value creation process of banks. However, analysts' views vary. Quantitative-oriented bank analysts interpret intangibles primarily as the items that appear on the balance sheet, while 'mixed methods' analysts (using a mix of quantitative and qualitative methods) do not employ such a narrow definition of intangibles. They look at other non-financial intangible items,

and agree with managers that intangibles are critical sources of competitive advantage. The variation in analysts' and managers' understanding of intangibles may be due to two factors. First, the broader economic circumstances affect analysts' research focus and information production priorities. For example, the case data shows that during the financial crisis, when capital or liquidity problems were crucial for the majority of financial institutions, most of the analysts placed more emphasis on tangible financial resources than intangibles, as mentioned by analyst A7.

Second, analysts appear to be "technocratic and rules-driven in nature" (Campbell & Slack, 2008, p. 4). Their reports are generally based on numerical data about financial resources. However, information on intangibles is disclosed voluntarily and largely presented in qualitative terms, and this to some extent limits the usefulness of such information in reporting. Analyst A10 notes:

"I am really interested in it [intangibles] if I can see a monetary issue attached with it and a way to prove it. And those are very difficult."

It should be pointed out that the narrow definition of intangibles given by some quantitative-oriented analysts does not mean that they do not look at other non-financial intangible items. Only a few quantitative-oriented analysts focus mainly on the accounting number of goodwill, paying little attention to other intangibles (A3 and A9).

We observe that bank managers tend to pay more attention to intangible elements in which they have relative strengths compared with their peers, but at the same time emphasise the importance of the combination of different intangible components. Many managers argue that customer relationships are the most important intangible element, followed by human capital and brand.

On the other hand, the majority of analysts think that goodwill on the balance sheet is the most important intangible element from a valuation perspective. For example, analyst A10 mentions that,

"[O]bviously for me, intangibles are largely the figures that I can see on the balance sheet, which is goodwill and acquired intangibles."

Goodwill became an even more important factor during the financial crisis, when capital became critical to banks' survival, as goodwill is deducted from capital. Goodwill is mainly discussed by analysts as an accounting issue, and treated as a financial metric on the balance sheet rather than an

intangible element. Even so, several analysts consider it as a proxy or measure of intangible assets, such as customer relationships, brands and branch networks (e.g., A2 and A10). As analyst A2 states,

> "*I think that's, first of all, on the balance sheet of the banks, they all have intangible elements, which just come from acquisition,… which is goodwill,…. That constitutes most of the intangibles. But that goodwill itself is a measure, [which] supposes to be a measure of the value of source of assets, intangible asset. And that includes franchise, brand value that we are mentioning, [and] customer relationships...*"

In addition to goodwill, most of the analysts argue that top management HC is another core intangible element. Analyst A6 states that top management skills can have an impact on other types of intangibles. This reflects analysts' ideas that changes in combinations of intangibles in the business model arise primarily because of top management decisions.

Although most of the analysts agree on the importance of top management HC, some of them stress that the relative importance of intangibles might vary between different types of banking. For example, some argue that brands and customer relationships are very powerful in retail banking (A2, A7 and A10), while human capital, such as professional skills and employee knowledge, tends to be extremely important in wholesale and investment banking (A2).

4.3.3. How do analysts' technical capital, tasks and routines affect their processing of soft information?

Prior financial statements are not considered a source of forward-looking information, but a detailed understanding of them serves as an important context or benchmark for analysts' interpretation of the meaning of forecasted changes that are expressed numerically. Technical analysis of financial statements, combined with quantitative macro forecasting and the production of 'hard' information, are strong features of all analyst routines. These features are seen as the core of analysts' formal professional capabilities or technical capital and as distinct from bank management capital. Analysts expect value relevant incremental information to arise from their special skills relative to this 'hard' information, such as the identification of major balance sheet problems, company debt exposures to interest rate changes, or changes in bank accounting methods or judgements. Analysts' routine tasks

involve search, analysis, evaluation, estimation and report writing, all set in their parent firm context, forming part of each analyst's 'habitus' within their parent firm.

4.3.4. How do parent firm field and capitals affect analysts' processing of soft information?

Parent firm field and organisational factors are part of the social field in which analysts operate. They are important to analysts' information processing capabilities (Royal & Rowley, 2012). Analysts' parent firms vary in size, reputation and perceived power, as well as in financial resources and knowledge management skills. These factors influence the parent firm's capability to support analyst learning, internal knowledge exchange, the development of individual analyst skills and the sharing of knowledge about company business models. In addition, parent firm social field factors (such as culture, hierarchy, and control processes) and each analyst's individual 'style' are linked. These internal social field factors are expected to influence analysts' information intermediation processes, their research routines and tasks, and their relative use of 'soft' and 'hard' information in internal processing and analysis activities. A highly centralised investment bank parent, for example, is expected to demand that its analysts use more 'hard' information (Stein, 2002; Chen, Harrison, & Kubik, 2004), thus reducing analysts' explicit use of 'soft' information. For example, analyst A13 talks about how his parent firm culture affects his research (i.e., bank valuation),

> *"Here we are very much encouraged to look deeper, spend more time analysing [information]. So they [parent firm managers] are very happy for us to take a bit more time on research, ..., while some other houses I think actually prefer doing quick, getting things out as fast as possible. ... Ultimately your recommendations belong to you – you are the one that makes them. But the culture plays a role in the way you do your research and the methods which you employed doing your research."*

The parent firm's ability to organise training and knowledge management is a major factor in analysts' ability to analyse corporate intangibles (Royal & Rowley, 2012) and hence develop technical capital in this respect. Analysts can combine their specialist knowledge of bank business models, of competitive analysis and of financial statements with special parent macro skills, to generate superior earnings forecasts (Hutton, Lee, & Shu, 2012). These contribute to analysts' main advantages and

unique selling points, especially the mix of technical capital and social capital chosen by the parent firm. This joint package is more important than the precise accuracy of forecasts alone or buy/sell advice (Imam & Spence, 2016).

Most of the case bank analysts are operating in firms with technical capital based on 'mixed methods' research. They are more prepared to and able to talk about intangibles with researchers. High capabilities in financial statement analysis and quantitative macro forecasting are still required of these analysts, but the role of subjective qualitative analysis is considered important in generating and understanding the numbers. Other case bank analysts, who are operating in investment banks with quantitative research approaches, low autonomy and a low awareness of corporate intangibles, tend to focus more on accounting intangibles, such as goodwill, and less on knowledge-based, 'soft' bank intangibles. It should also be noted that the analysts mixing 'soft' and 'hard' information moves more towards 'hard' information about banks during the crisis.

4.3.5. How do knowledge issues and habitus affect analysts' processing of soft information?

Many knowledge issues arise within the analysts' function and parent firms, and these influence analysts' habitus and information differences. Each analyst has their own personal knowledge, skills and capabilities, and preferences for qualitative or quantitative information. Each analyst operates within parent firms with differing views of appropriate technical capital. These factors affect analysts' ability to exploit their knowledge and competences (Royal & Rowley, 2012).

Analysts' knowledge of MFI networks and relations with companies and FMs form part of their internalised knowledge structure (Holland, 2017; Stones, 2005). The case bank analysts also have specialist skills in gaining incremental information about companies in their competitive environment and in developing their own narratives about the company business model. For instance, analyst A12 has well-developed social capital. He mentions that it is difficult for him to get information about management quality in the public domain, but as he has known some bank managers for years, he has formed personal opinions about them.

During the information production process, the case bank analysts have to deal with the problems created by the idiosyncratic nature of knowledge-based bank intangibles (Catasus et al. 2007;

Cuganesan, 2005). Compared to the bank managers, the bank analysts have no control over the use of intangibles and thus intangibles are more 'intangible' for them than for bank managers. Access issues and idiosyncratic problems increase bounded rationality (Simon, 1957). Analysts develop a form of 'ecological rationality' where the structure of their boundedly rational decision mechanisms matches the structure of information in the environment (Todd & Gigerenzer, 2012).

As analyst A2 explains,

"…*When we talk about intangibles, by its nature, it's soft data. It's hard to assess the value of it. So we have to just make our own judgement about it, based on, like, we know that a bank is qualified, that we think it has qualitative brand, its franchise, maybe based on market share data or whatever. That's what we have to do*."

In a nutshell, many field, habitus, and capital factors lie behind differences between bank analyst and bank IC based information, including differences in tasks, routines, behaviours, knowledge and parent firm factors. These influence analysts' use and analysis of bank 'soft' information, and explain why bank sourced information changes within bank analysts' processes**.**

4.4. Analysts' disclosure of 'soft' information

In this sub-section, we use Bourdieu (1990) and associated literature to interpret how bank analysts report soft' information about bank intangibles to FMs and how differences in public and private reporting arise. Analysts' interactions with FMs over time in the MFI field during periods of banking change, are a means to structure *demand side aspects of* analyst's habitus and capitals, which in turn structure their information reporting activities and relative information power with FMs. Differences between information demanded and behaviour expected in public and private social parts of the MFI field, and different threats to reputation, also influence analysts' habitus and capitals.

4.4.1 Analysts' reporting and disclosure of 'soft' information – public and private

Public reporting and private disclosure by case bank analysts are two important outcomes of analysts' research and analysis. When questioned about 'how information about bank intangibles was

communicated to your clients', analyst A15 said that investors can read their published reports, and they also communicate information with their clients via telephone, email and/or one-to-one meeting.

Public reports by banks and private information from bank managers are starting points for new estimates of financial numbers (e.g., earnings forecasts, bank cash flows and estimated value range for bank shares), which form the basis for analysts' public recommendations and provide the means to develop a public narrative. The case bank analysts' private disclosure to 'relationship' FM clients is concerned with incremental disclosure content over and above public disclosure. If bank management and FMs are discussing a special set of financial variables and indicators for intangibles, then the case bank analysts are expected to show expertise and provide more information in these areas. Information packages thus vary according to users and potential economic benefits for analysts and their parent firms, reflecting the marketing strategy of the analyst's parent firm.

4.4.2. The differences between analysts' public and private reports

Some previous research finds that sell-side analysts make extensive use of IC information in their valuation process (e.g., Abhayawansa et al. 2015, 2018). However, we find that there are significant differences between bank analysts' public information set (as narrative text) and their private information set. The interview data shows that analysts focus more on financial tangibles measures in their public reports and provide less information about intangibles. This is also confirmed by the findings of documentary analysis of bank analyst reports. As shown in Table 1, the total items of intangibles addressed in the 89 analyst reports is 147, compared to 567 items on tangible or financial items[5].

As noted above, the case analysts' public disclosures about banks are based, in part, on their private and public information. The public information set (as narrative text and indicators) is normally an adapted and restricted version of the private information set, focusing on the same broad areas.

[5] It should be noted Abhayawansa et al.'s (2018) content analysis were based on initiation coverage reports, which are argued to be the lengthiest, most detailed and substantiated type of sell-side reports, including comprehensive narratives about the company (Abhayawansa et al., 2018) and excluding incomplete follow-up reports (Flöstrand, 2006).

However, bank analysts' public ('soft') information set is not the same as their private information set, and is a 'shadow' of the bank managements' information set.

The interview data reveals that there are differences between the case bank analysts' public reports and their private thoughts. Most of the analysts interviewed do consider intangibles when assessing a bank, although such information cannot be included in their public reports as formal explanations of recommendations. As analyst A5 states,

> *"I can't put that [intangibles] into financial numbers. But I can, when I'm thinking about whether I recommend people should buy or sell the shares, I do take into account [intangibles]. I think those are important issues…"*

Although the case bank analysts make full use of qualitative bank-sourced information in their private information production, they use such information cautiously in the public domain. In contrast, they make more use of their own sources of qualitative information, for private justification of forecast numbers and recommendations, and for impression management.

Many analyst interviewees are concerned about the reliability, auditability and comparability of intangible measures used. Analysts find it difficult to get reliable information about intangibles that they can use to assist in bank valuation in their reports. In part, this is because banks are reluctant to report detailed information about intangibles, as they are normally a key source of competitive advantage. These problems exacerbate intangible measurement and reporting problems for analysts.

Many of the case bank analysts recognise that they have limited access to information about intangibles in the public domain. Analyst A5 mentions that he has acquired very little information about some intangibles, such as brands or information related to employees. Similarly, when asked whether intangible measures are publicly available, analyst A2 remarks,

> *"[F]or the most part [of intangibles], they [banks] keep [it] all to themselves. …these things [intangibles] get measured all the time… Banks …are very keen to get that information and to see how they are progressing compared with their competitors. …but they don't always share these with us."*

Even when information on bank intangibles is publicly available, some analysts tend to doubt its reliability, due to the problem of information manipulation, and therefore are cautious about including bank-sourced measures of intangibles in their public reports. Analyst A4 explains that,

> *"[B]anks would put effort to ensure that customer service level would be improved, or employee happiness in the workplaces [is improved]. They have different measures and show us what [of] those things are improving. But to be honest, most people are pretty critical, [and] not quite convinced by those sorts of things."*

The case bank analysts are more prepared to include negative news about intangibles in their reports, considering warning indicators and some negative intangibles to be important. However, banks tend to only report positive information about intangibles. Analyst A1 points out that "*companies will never tell you when they are uncomfortable with some things*", while analyst A6 argues that banks tend to be "*overlarge with evidence of their brilliance*".

Additionally, intangible information is made less useful due to problems with comparability and consistency. For example, analyst A10 remarks that she is not really interested in some kinds of information about intangibles, such as bank employee or customer survey results,

> *"[B]ecause it is very difficult to compare one with another – there isn't one company doing all the surveys…you're not sure if it is a level playing field… Their disclosure is not consistent...they tend to give [it to] you once, but ...don't tend to give [it to] you again."*

Despite these problems of information availability, measurement, comparability, manipulation and bias, analysts express an increasing need for quantitative information about bank intangibles, and they also would like to see the link between this information and bank financial performance. They discuss how they seek to acquire relevant information about bank intangibles from independent sources or private channels to develop their valuation and reporting capability. Analyst A9 states that he tries to collect as much information as possible from public sources, including banks' regulatory filings and credit rating agencies' reports. Analyst A8 points out that analysts normally collect information about intangibles through '*a number of different touch points*', such as spending time in meetings with bank management and looking at their track record. These varied sources of intangibles information diversify

information risk and create confidence when predicting the factors essential to creating superior financial performance in banks.

Bank analysts are also concerned about their reputation when disclosing information to the market (Jackson, 2005). They have incentives to bias their public information outputs based on their preference to present themselves publicly as logical, numerate and scientific. They prefer to disclose less 'soft' information and less difficult-to-measure company IC information in their public reports. For instance, analyst A10 explains that "*my job is to tell you how much a company is worth under certain parameters and certain scenarios*".

In summary, we find that although many of the case bank analysts doubt the usefulness of disclosed information about intangibles, they recognise the importance of bank intangibles and acknowledge that there is a need for standardised, reliable and comparable intangible information. However, because of the problems with intangibles disclosure, analysts feel that some intangible information is useful in their private information production, but is not sufficiently reliable for their public reports.

4.4.3. Factors driving public and private disclosure differences

Economic factors such as market incentives (Healy & Palepu, 2001), competitive advantage issues and economic circumstances are important factors in the case bank analysts' decisions regarding public and private disclosures of 'hard' and 'soft' information. They have to ensure that they are able to produce timely public reports in responding to the changes in the MFI. As analyst A15 indicates,

> "*For us, we have to write reports quickly as the situation changes very quickly. So there is no chance for me to put everything in the written reports and some detailed information will be communicated to clients privately.*"

These economic factors are closely linked to and influenced by social, behavioural and knowledge factors for analysts. These factors include, inter alia, social norms of behaviour in the MFI network and established MFI practices (e.g., standardised analyst reports), both of which influence analyst disclosure activities. Social consensus factors in MFI networks ensure that bank analysts structure public reports using a 'standard' summary and detailed structure for ease of comparison

(Breton & Taffler, 2001). These MFI field factors also ensure that high-quality 'soft' information is normally only disclosed in private channels.

Habitus factors (such as 'rules of the game') and behavioural factors (Fogarty & Rogers, 2005) are important for the case bank analysts when using text in their public report narratives to justify recommendations and forecasts. They are generally careful to use language that does not create 'hostages to fortune' in the MFI. They protect their reputation (as symbolic capital) for using scientific methods and good communication and explanatory skills. This is a form of impression management (Abhayawansa & Guthrie, 2012). As a result, the case bank analysts' public reports contain forecast numbers but have limited contextual explanations.

The case bank analysts operate in their own analyst 'community of practice' (Lave & Wenger, 1991) as a specialist professional field in the MFI. Bank analysts publicly 'herd' around consensus forecasts (Jackson, 2005) and generally accepted narratives (sometimes myths) about bank business stories (Holland, 2005, 2010). This is especially true where they have 'soft' information and subjective insights that they cannot back up with scientific evidence or replicable numbers. However, the case bank analysts need to attract attention in the MFI and get people to read their reports. They do not reveal the full analyst picture but signal that they have more insights than consensus views. Analyst A15 explains why his clients are interested in meeting him privately,

> "*Investors want two kinds of information from us: they want the financial part of the bank, and also want opinions from analysts. Our opinions include both tangibles and intangibles of the bank. For example, they want to know how we think about management of the bank; how strong the bank [is] in some areas and weak in other areas; and the strategy of the bank.*"

They also have incentives to tell bank value creation stories in positive ways (Fogarty & Rogers, 2005), and to keep bank management and their own parent firm happy (Groysberg, Healy, & Chapman, 2008). The case bank analysts' interests are in part aligned with the interests of the banks they are analysing, as they may have a desire for improved access to bank information. Their outcomes are also aligned with the interests of FM clients and their parent firm.

4.4.4. Competitive advantage and public/private disclosure differences

Knowledge issues and competitive advantage are important to analysts making the choice between their private and public disclosure. Imam and Spence (2016) argue that the primary value of analysts for FMs lies in their provision of rich contextual information. Both 'hard' and 'soft' information are required to create meaning for decision makers, and one source alone is of limited use (Imam & Spence, 2016).

FMs expect bank analysts to have specialised technical capital and the ability to use their knowledge to interpret events and explain their forecasts and advice. The case bank analysts indicate that they use their knowledge advantage to provide considerable private 'soft' information to FM clients and their buy-side analysts. This is much richer than textual 'soft' information in their public reports. For example, analyst A6 explains,

> *"I might have 25 people I talk to regularly,… the longer-term investors might spend some time asking about qualitative [things] about management... but it's not something we are really writing about [in our report]."*

The case bank analysts also have incentives to protect their symbolic capital by concealing their perceived knowledge edge and exploiting it in private. They do not wish to reveal their special knowledge advantage for information production, nor to publicly reveal that they have been 'unscientific' by using qualitative and subjective information in intuitive judgements and decisions. As a result, before framing their potential for asymmetric personal financial gains and losses, analysts frame gains and losses relative to their reputation and credibility 'assets' as a first stage. This joint framing of the analysts' own intangibles risks and financial risks is an extension of Tversky and Kahneman's (1992) model in a joint organisational and market context. The case analyst's views show that, there is no contradiction between analysts' private interest and use of information on bank intangibles, and their very limited public disclosure of this information. The differences are a result of their 'social logics' in the MFI field as well as economic incentives.

The social context for bank analysts with clients in the MFI field is a major influence on analysts' preference for the use of narrative in private. Private exchanges provide an opportunity for bank analysts to demonstrate their technical capital as explanatory and judgemental capabilities concerning specific

banks. They can privately communicate this to buy-side analysts who face similar decisions and who understand the problems and limits of 'scientific' estimates and judgemental explanation (Holland, 2006). Getting this right is a key credibility issue for bank analysts when creating a private relationship-based reputation or cultural capital.

5. Conclusions

The extant literature on sell-side analysts provides very limited evidence on how they use information in their day to day work. This paper contributes to the integrated understanding of financial intermediation from the Bourdieusian perspective. Based on interview data with bank managers and analysts and also content analysis of analyst reports, this paper develops an analyst intermediation model, revealing how the same type of 'soft' information changes during analyst research, analysis and reporting stages. It also shows how knowledge and social contexts in the MFI play a role and affect the information changes, as well as analysts' behaviour and perceptions. Knowledge and information of banks, analysts and other market actors have a strong complementary nature. Empirical evidence reveals that analyst and bank 'soft' information sources are similar ('mirror images') because of their common interest in and knowledge of the bank business model. Analysts' public 'soft' information is different from (a 'shadow' of) bank 'soft' information because of differences in tasks, capabilities and social contexts between analysts and bank management. 'Soft' information in analysts' public report (as narrative texts) is very limited, but analysts' private information disclosure is much richer in these areas.

These variations in analysts' behaviour are interpreted, using Bourdieu's (1990) frameworks, as arising because of the differing impacts of social, knowledge and market factors in these domains. Bank analysts interviewed here perform their role in the connected MFI field and parent firm field by exploiting their capital and their 'sense of the game' or habitus (Imam & Spence, 2016) to achieve purposes of information intermediation and their personal aims, and also to maintain and perhaps enhance their capital. Their behaviour varies depending on their relative information power (based on varying capital) in the MFI information supply and demand sides and within the parent firm. The subjective nature of soft information is used in this paper as a lens to reveal how economic, knowledge

and social factors impact analysts' behaviour. These factors are counterbalanced by analysts' technical capital and symbolic capital, such as ranking among key FM clients and the wider MFI. The variation in analysts' capital and habitus led to variation in analyst information power and hence behaviour in the acquisition, analysis and disclosure phases of the analyst information intermediation model.

This paper improves our knowledge of what analysts actually do in the MFI. It shows the combination of conventional finance theory and a broader social and knowledge-based literature (e.g., Bourdieu's ideas) can create a more complete conceptual framework to explore issues concerning analysts and companies, as well as the wider MFI. Future research that seeks to understand other MFI intermediaries, such as buy-side analysts, auditors, rating agencies, financial media and other agents, in a similar way is needed.

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Figure 1. The information intermediation role of analysts - Main elements in the empirical model

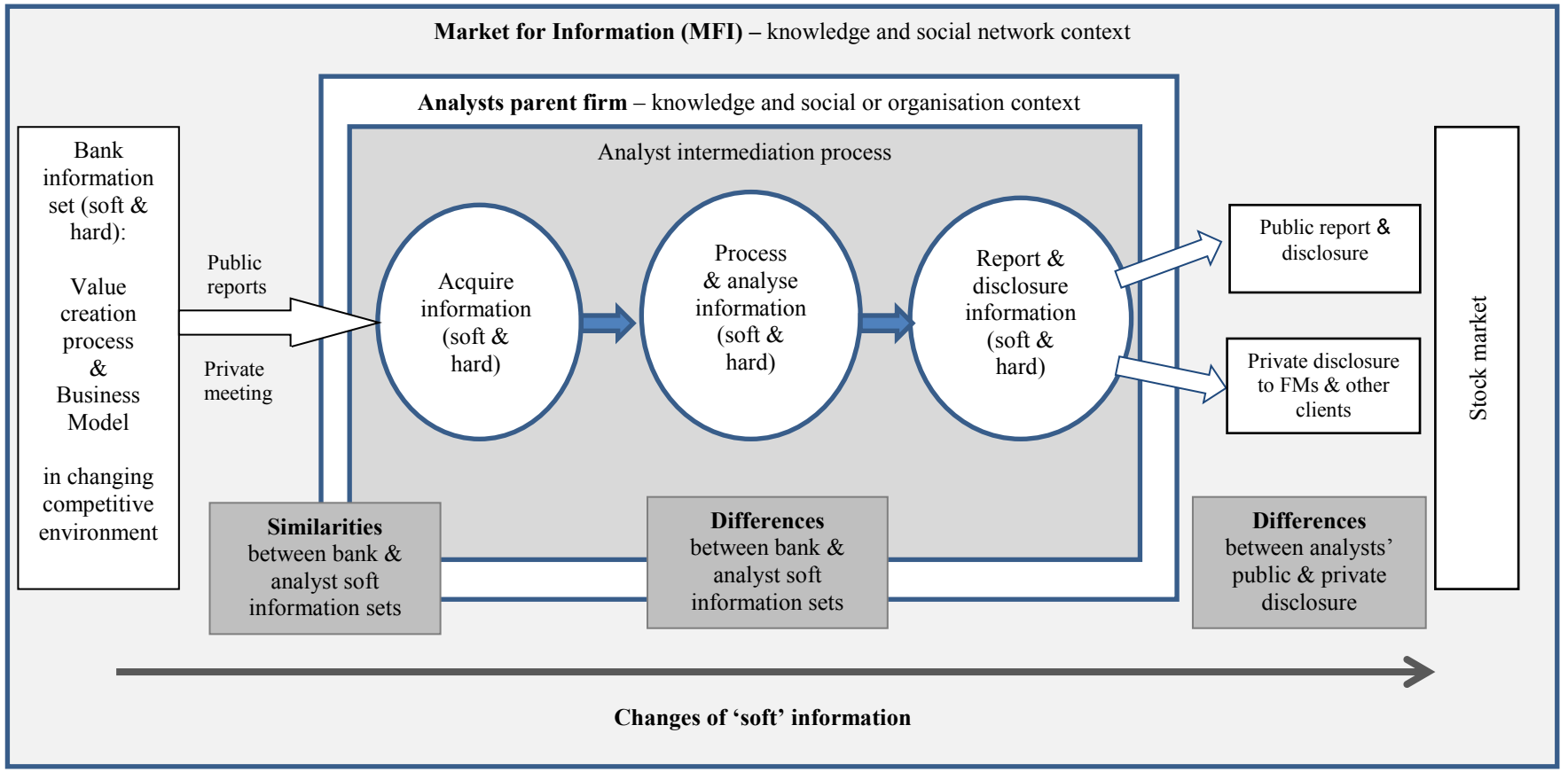

Table 1. Items addressed in analyst reports

This table shows items of external conditions, tangible/financial resources and intangible resources addressed in 89 analyst reports published by some interviewees during the period of 2007-2010.

Categories	Items		Number of reports	Percentage of total reports	Means of reported items in each category
External conditions	M&A/disposal of business		23	25.8	
	Economic factors		74	83.1	
	Regulation, standards or policies		32	36.0	
	Total items of external conditions		129		43
Tangible/ financial resources	Profit/loss		77	86.5	
	Growth		61	68.5	
	Income/revenue		69	77.5	
	Cost/charge		62	69.7	
	Risk		61	68.5	
	Capital		63	70.8	
	Dividend		32	36.0	
	Share/right issues		24	27.0	
	Loan		71	80.0	
	Deposit		47	52.8	
	Total items of tangible/financial resources		567		57
Intangibles	Goodwill		9	10.1	
	Human capital (HC)	Top management team, management experience, capability or quality	24	27.0	
		General HC, staff attrition/ recruitment	4	4.5	
		Salary scheme	1	1.1	
		Total items of HC	29		10
	Structural capital (SC)	Strategy	23	25.8	
		Credit rating/credit quality	12	13.5	
		Research & investment	1	1.1	
		System/programme	1	1.1	
		Technology	4	4.5	
		Total items of SC	41		8
	Relational capital (RC)	Customer franchise/customer base	9	10.1	
		Customer relationships (e.g., long deposit, cross selling)	12	13.5	
		Customer satisfaction/meet customer needs	4	4.5	
		Other customer/investor-related items (e.g., customer quality, customer/investor confidence)	6	6.7	
		Distribution network/business contacts	14	15.7	
		Brand	23	25.8	
		Total items of RC	68		11
	Total items of intangibles		147		